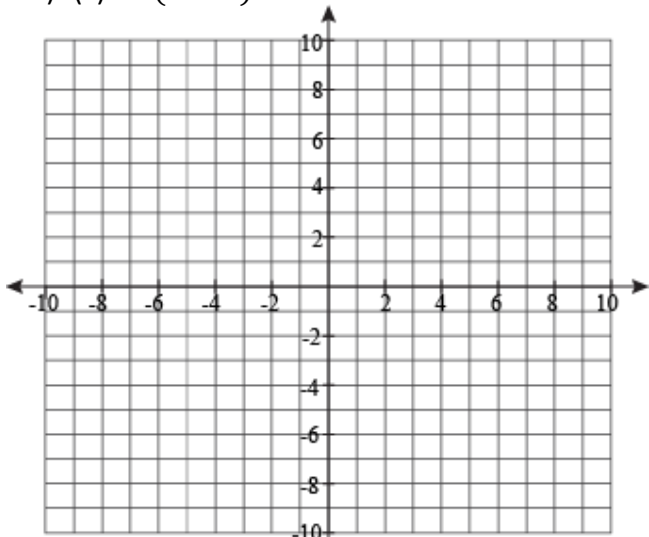


# Transformations of Square Roots

Name: \_\_\_\_\_

Graph each function and identify the specified attributes of the graph.

1)  $f(x) = 2(x + 3)^{1/2} - 6$



x	f(x)

Vertex: \_\_\_\_\_

Increasing: \_\_\_\_\_

Decreasing: \_\_\_\_\_

Domain: \_\_\_\_\_ Range: \_\_\_\_\_

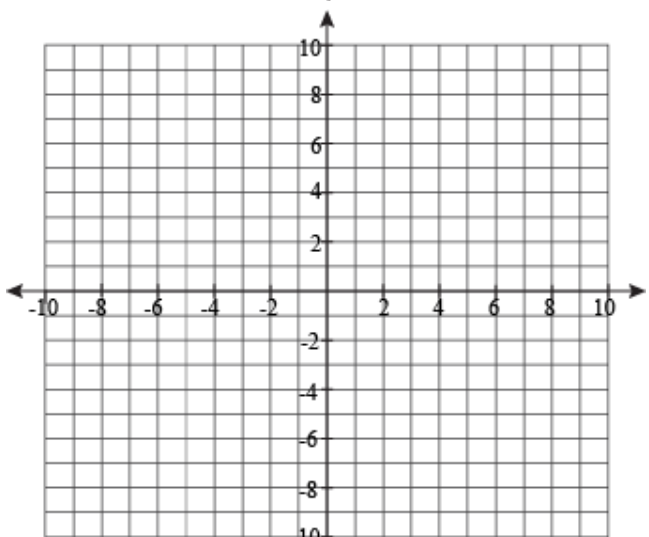
x-intercept: \_\_\_\_\_ y-intercept: \_\_\_\_\_

End behavior: \_\_\_\_\_

Transformation(s): \_\_\_\_\_

\_\_\_\_\_

2)  $g(x) = -\sqrt{2x + 4}$



x	f(x)

Vertex: \_\_\_\_\_

Increasing: \_\_\_\_\_

Decreasing: \_\_\_\_\_

Domain: \_\_\_\_\_ Range: \_\_\_\_\_

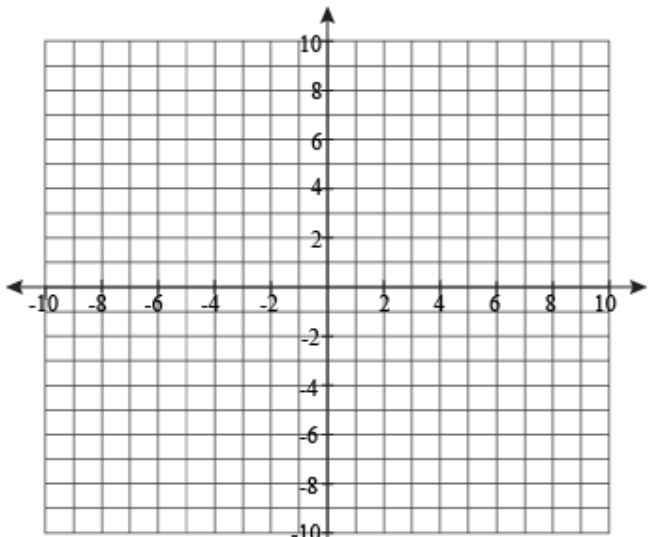
x-intercept: \_\_\_\_\_ y-intercept: \_\_\_\_\_

End behavior: \_\_\_\_\_

Transformation(s): \_\_\_\_\_

\_\_\_\_\_

3)  $h(x) = 3\sqrt{4 - x} + 1$



x	f(x)

Vertex: \_\_\_\_\_

Increasing: \_\_\_\_\_

Decreasing: \_\_\_\_\_

Domain: \_\_\_\_\_ Range: \_\_\_\_\_

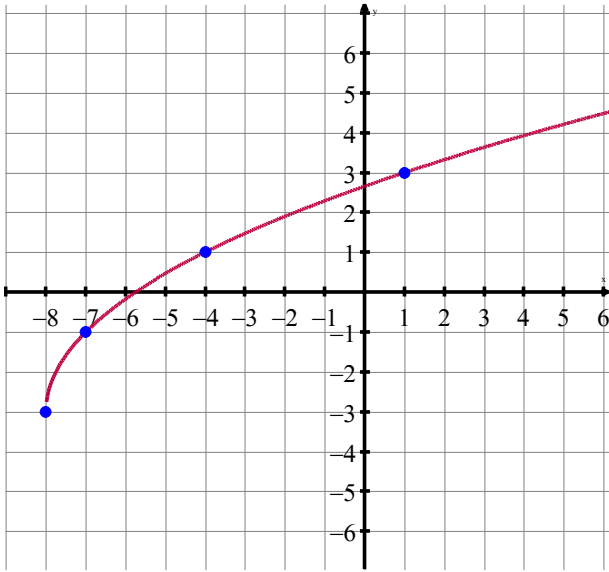
x-intercept: \_\_\_\_\_ y-intercept: \_\_\_\_\_

End behavior: \_\_\_\_\_

Transformation(s): \_\_\_\_\_

\_\_\_\_\_

4) The graph of  $h(x)$  is shown below. Write the equation from the graph and identify its characteristics.



Equation: \_\_\_\_\_ Vertex: \_\_\_\_\_

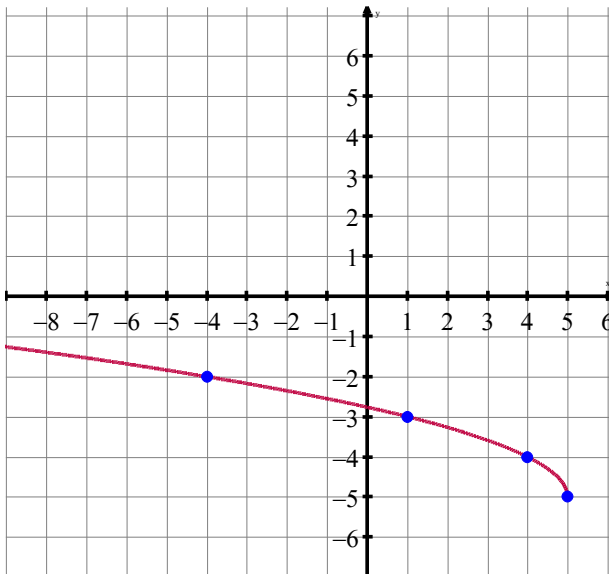
End Behavior: \_\_\_\_\_

Domain: \_\_\_\_\_ Range: \_\_\_\_\_

Transformation(s): \_\_\_\_\_

\_\_\_\_\_

5) The graph of  $k(x)$  is shown below. Write the equation from the graph and identify its characteristics.



Equation: \_\_\_\_\_ Vertex: \_\_\_\_\_

End Behavior: \_\_\_\_\_

Domain: \_\_\_\_\_ Range: \_\_\_\_\_

Transformation(s): \_\_\_\_\_

\_\_\_\_\_

The following transformations (written in function notation) are applied to the graph of  $f(x)$ . Identify the transformation and circle all of the attributes of the graph of  $f(x)$  that will change as a result of the transformation.

6)  $f(x + 2)$  Transformation: \_\_\_\_\_

Vertex      Domain      Range      Increasing      Decreasing      End behavior

7)  $-2f(x)$  Transformations: \_\_\_\_\_

Vertex      Domain      Range      Increasing      Decreasing      End behavior

8)  $f(-x)$  Transformation: \_\_\_\_\_

Vertex      Domain      Range      Increasing      Decreasing      End behavior